

SEQUENCE LISTING

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<212> PRT

<213> Cnidopus japonicus

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Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly

20 25 30

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly

35 40 45

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Tyr

50 55 60

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe

65 70 75 80

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr

85 90 95

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly

100 105 110

Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro

115 120 125

Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
130 135 140
Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
145 150 155 160
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
165 170 175
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
180 185 190
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
195 200 205
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
210 215 220
Cys Pro Ser Lys Leu Gly His Asn
225 230

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<213> Cnidopus japonicus
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Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu
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ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96
Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly
20 25 30
aag cca tac gag gga act caa atg gag aac ata aaa gtc acc aaa gga 144

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
 35 40 45
 ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa tat 192
 Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Tyr
 50 55 60
 gga agc gta gcc ata acc aag tat aca tca ggg att cca gac tac ttt 240
 Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80
 aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288
 Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95
 gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336
 Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
 100 105 110
 aat tgc ctc gtc tac aat att aaa atc ctt gga tgt aat ttt ccc ccc 384
 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
 115 120 125
 aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432
 Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
 130 135 140
 gag atg cgc tat aca cgt gat ggt gtg cta tgt ggc caa aca tta atg 480
 Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
 145 150 155 160
 gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528
 Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
 165 170 175
 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576

Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
180 185 190
cat ttt tca gac cat cgt cct gaa ata gtg aag gtt tca gag aac ggc 624
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
195 200 205
aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
210 215 220
tgc cca tct aaa ctt ggt cac aat taa 699
Cys Pro Ser Lys Leu Gly His Asn
225 230

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<213> Artificial Sequence

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<212> DNA

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<223> Description of Artificial Sequence: Synthetic DNA

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<212> DNA

<213> Artificial Sequence

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<212> DNA

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 11

<211> 232

<212> PRT

<213> Cnidopus japonicus

<400> 11

Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu

1 5 10 15

Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly

20 25 30

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly

35 40 45

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Leu

50 55 60

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe

65 70 75 80

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr

85 90 95

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly

100 105 110

Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro

115 120 125

Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys

130 135 144

Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met

145 150 155 160
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
165 170 175
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
180 185 190
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
195 200 205
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
210 215 220
Cys Pro Ser Lys Leu Gly His Asn
225 230

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ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96
Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly
20 25 30
aag cca tac gag gga actcaa atg gag aac ata aaa gtc acc aaa gga 144
Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
35 40 45
ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa ctt 192

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Leu
 50 55 60
 gga agc gta gcc ata acc aag tat aca tca ggg att cca gac tac ttt 240
 Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80
 aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288
 Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95
 gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336
 Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
 100 105 110
 aat tgc ctc gtc tac aat att aaa atc ctt gga tgt aat ttt ccc ccc 384
 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
 115 120 125
 aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432
 Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
 130 135 144
 gag atg cgc tat aca cgt gat ggt gtg cta tgt ggc caa aca tta atg 480
 Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
 145 150 155 160
 gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528
 Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
 165 170 175
 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576
 Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
 180 185 190
 cat ttt tca gac cat cgt cct gaa ata gtg aag gtt tca gag aac ggc 624

His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
 195 200 205
 aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672
 Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
 210 215 220
 tgc cca tct aaa ctt ggt cac aat taa 699
 Cys Pro Ser Lys Leu Gly His Asn
 225 230

<210> 13
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 <212> PRT
 <213> Cnidopus japonicus
 <400> 13

Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu
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 Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly
 20 25 30

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
 35 40 45

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Met
 50 55 60

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly

100	105	110
Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro		
115	120	125
Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys		
130	135	140
Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met		
145	150	155
160		
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr		
165	170	175
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe		
180	185	190
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly		
195	200	205
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr		
210	215	220
Cys Pro Ser Lys Leu Gly His Asn		
225	230	
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15		
ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96		

Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly
 20 25 30
 aag cca tac gag gga act caa atg gag aac ata aaa gtc acc aaa gga 144
 Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
 35 40 45
 ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa atg 192
 Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Met
 50 55 60
 gga agc gta gcc ata acc aag tat aca tca ggg att cca gac tac ttt 240
 Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80
 aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288
 Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95
 gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336
 Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
 100 105 110
 aat tgc ctc gtc tac aat att aaa atc ctt gga tgt aat ttt ccc ccc 384
 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
 115 120 125
 aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432
 Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
 130 135 140
 gag atg cgc tat aca cgt gat ggt gtg cta tgt ggc caa aca tta atg 480
 Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
 145 150 155 160
 gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528

Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
 165 170 175
 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576
 Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
 180 185 190
 cat ttt tca gac cat cgt cct gaa ata gtg aag gtt tca gag aac ggc 624
 His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
 195 200 205
 aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672
 Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
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 tgc cca tct aaa ctt ggt cac aat taa 699
 Cys Pro Ser Lys Leu Gly His Asn
 225 230

<210> 15
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 <213> Cnidopus japonicus
 <400> 15

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 20 25 30
 Lys Pro Tyr Glu Gly Thr Gln Met Leu Asn Ile Lys Val Thr Lys Gly
 35 40 45
 Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Met

50	55	60
Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Gly		
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Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr		
85	90	95
Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly		
100	105	110
Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro		
115	120	125
Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys		
130	135	140
Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met		
145	150	155
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr		
165	170	175
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe		
180	185	190
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly		
195	200	205
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr		
210	215	220
Cys Pro Ser Lys Leu Gly His Asn		
225	230	

<210> 16

<211> 699

<212> DNA

<213> Cnidopus japonicus

<400> 16

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15

ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96

Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly

20

25

30

aag cca tac gag gga actcaa atg ctt aac ata aaa gtc acc aaa gga 144

Lys Pro Tyr Glu Gly Thr Gln Met Leu Asn Ile Lys Val Thr Lys Gly

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40

45

ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa tat 192

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Met

50

55

60

gga agc gta gcc ata acc aag tat aca tca ggg att cca gac tac ggt 240

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Gly

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70

75

80

aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr

85

90

95

gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly

100

105

110

aat tgc ctc gtc tac aat att aaa atc ctt gga tgt aat ttt ccc ccc 384

Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro

115

120

125

aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432

Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
130 135 140
gag atg cgc tat aca cgt gat ggt gtg cta tgt ggc caa aca tta atg 480
Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
145 150 155 160
gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
165 170 175
act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
180 185 190
cat ttt tca gac cat cgt cct gaa ata gtg aag gtt tca gag aac ggc 624
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
195 200 205
aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
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tgc cca tct aaa ctt ggt cac aat taa 699
Cys Pro Ser Lys Leu Gly His Asn
225 230

<210> 17

<211> 232

<212> PRT

<213> Cnidopus japonicus

<400> 17

Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu

5	10	15
Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly		
20	25	30
Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly		
35	40	45
Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Phe		
50	55	60
Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe		
65	70	75
Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr		
85	90	95
Lys Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly		
100	105	110
Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro		
115	120	125
Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys		
130	135	140
Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met		
145	150	155
Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr		
165	170	175
Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe		
180	185	190
His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly		
195	200	205
Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr		
210	215	220

Cys Pro Ser Lys Leu Gly His Asn

225 230

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<211> 699

<212> DNA

<213> Cnidopus japonicus

<400> 18

atg gct tcc aaa atc agc gac aat gta cgt atc aag tta tat atg gag 48

Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu

5 10 15

ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96

Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly

20 25 30

aag cca tac gag gga actcaa atg gag aac ata aaa gtc acc aaa gga 144

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly

35 40 45

ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa ttt 192

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Phe

50 55 60

gga agc gta gcc ata acc aag tat aca tca ggg att cca gac tac ttt 240

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe

65 70 75 80

aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr

85 90 95

gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
 100 105 110
 aat tgc ctc gtc tac aat att aaa atc ctt gga tgt aat ttt ccc ccc 384
 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
 115 120 125
 aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432
 Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
 130 135 140
 gag atg cgc tat aca cgt gat ggt gtg cta tgt ggc caa aca tta atg 480
 Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
 145 150 155 160
 gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528
 Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
 165 170 175
 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576
 Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
 180 185 190
 cat ttt tca gac cat cgt cct gaa ata gtg aag gtt tca gag aac ggc 624
 His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
 195 200 205
 aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672
 Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
 210 215 220
 tgc cca tct aaa ctt ggt cac aat taa 699
 Cys Pro Ser Lys Leu Gly His Asn
 225 230

<210> 19

<211> 232

<212> PRT

<213> Cnidopus japonicus

<400> 19

Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu

1

5

10

15

Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly

20

25

30

Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly

35

40

45

Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln His

50

55

60

Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe

65

70

75

80

Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr

85

90

95

Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly

100

105

110

Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro

115

120

125

Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys

130

135

140

Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met

145

150

155

160

Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr

165

170

175

Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
 180 185 190
 His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
 195 200 205
 Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
 210 215 220
 Cys Pro Ser Lys Leu Gly His Asn
 225 230

<210> 20
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 <400> 20

atg gct tcc aaa atc agc gac aat gta cgt atc aag tta tat atg gag 48
 Met Ala Ser Lys Ile Ser Asp Asn Val Arg Ile Lys Leu Tyr Met Glu
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 ggc aca gtc aac aat cat cac ttc atg tgc gaa gct gaa gga gag ggc 96
 Gly Thr Val Asn Asn His His Phe Met Cys Glu Ala Glu Gly Glu Gly
 20 25 30
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 Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
 35 40 45
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 Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln His
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Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80
 aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288
 Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95
 gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336
 Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
 100 105 110
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 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
 115 120 125
 aat ggt cct gtg atg cag aag aaa acc caa ggc tgg gaa ccc tgt tgc 432
 Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Cys Cys
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 Glu Met Arg Tyr Thr Arg Asp Gly Val Leu Cys Gly Gln Thr Leu Met
 145 150 155 160
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 Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
 165 170 175
 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576
 Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
 180 185 190
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 His Phe Ser Asp His Arg Pro Glu Ile Val Lys Val Ser Glu Asn Gly
 195 200 205
 aca cta ttt gaa cag cac gaa agt tca gtg gcc agg tac tgt caa aca 672

Thr	Leu	Phe	Glu	Gln	His	Glu	Ser	Ser	Val	Ala	Arg	Tyr	Cys	Gln	Thr	
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Asn	Cys	Leu	Val	Tyr	Asn	Ile	Lys	Ile	Leu	Gly	Cys	Asn	Phe	Pro	Pro	
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Asn Gly Pro Val Met Gln Lys Lys Thr Gln Gly Trp Glu Pro Ser Cys
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 Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
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 His Phe Ser Asp His Arg Leu Glu Ile Val Lys Val Ser Glu Asn Gly
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 Cys Pro Ser Lys Leu Gly His Asn
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 Gly Thr Val Asn Asn His His Phe Met Val Glu Ala Glu Gly Glu Gly
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Lys Pro Tyr Glu Gly Thr Gln Met Glu Asn Ile Lys Val Thr Lys Gly
 35 40 45
 ggc cct ctg ccg ttc tct ttt gat atc ttg acg cct aac tgc caa tat 192
 Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Asn Cys Gln Met
 50 55 60
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 Gly Ser Val Ala Ile Thr Lys Tyr Thr Ser Gly Ile Pro Asp Tyr Phe
 65 70 75 80
 aag caa tct ttt cct gaa gga ttt acc tgg gaa aga acc aca atc tac 288
 Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Ile Tyr
 85 90 95
 gaa gat ggg gct tac ctt aca act caa caa gaa acc aaa ctt gat gga 336
 Glu Asp Gly Ala Tyr Leu Thr Thr Gln Gln Glu Thr Lys Leu Asp Gly
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 Asn Cys Leu Val Tyr Asn Ile Lys Ile Leu Gly Cys Asn Phe Pro Pro
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 145 150 155 160
 gca ctt aaa tgc gcc gat ggg aac cac ctc act tgc cat ctg aga act 528
 Ala Leu Lys Cys Ala Asp Gly Asn His Leu Thr Cys His Leu Arg Thr
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 act tac agg tcc aaa aag gca gca aag gcg ttg cag atg cca ccc ttc 576

Thr Tyr Arg Ser Lys Lys Ala Ala Lys Ala Leu Gln Met Pro Pro Phe
180 185 190
cat ttt tca gac cat cgt ctt gaa ata gtg aag gtt tca gag aac ggc 624
His Phe Ser Asp His Arg Leu Glu Ile Val Lys Val Ser Glu Asn Gly
195 200 205
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Thr Leu Phe Glu Gln His Glu Ser Ser Val Ala Arg Tyr Cys Gln Thr
210 215 220
tgc cca tct aaa ctt ggt cac aat taa 699
Cys Pro Ser Lys Leu Gly His Asn
225 230